



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

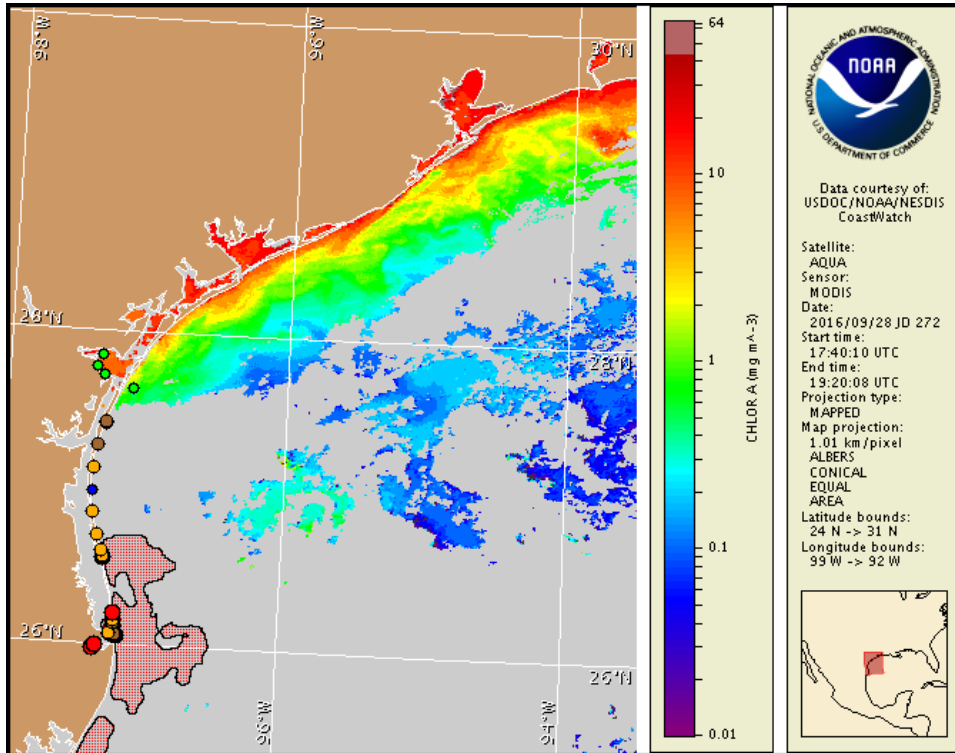
Thursday, 29 September 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 26, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 19 to 28: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast in the Port Aransas/Mustang Island to Rio Grande regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, September 29 through Monday, October 3 is listed below:

County Region: Forecast (Duration)

Padre Island National Seashore region: Moderate (Th-M)

Mansfield Pass to Beach Access 6 region: High (Th-M)

Beach Access 6 to Rio Grande region: High (Th-M)

Bay region-Lower Laguna Madre to Laguna Vista: High (Th-M)

All Other Texas Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Over the past few days, reports of dead fish and respiratory irritation have been received from the Lower Laguna Madre to Laguna Vista bay region and alongshore Beach Access 6 to the Rio Grande region.

Analysis

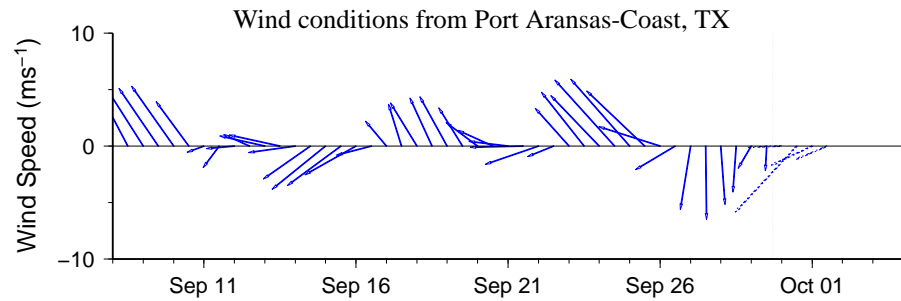
Karenia brevis concentrations range between 'not present' and 'high' along the Texas coast (TPWD; 9/23-28) from Aransas Pass to the Rio Grande. In the Aransas Pass to Padre Island National Seashore (PINS) region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates 'not present' to 'background' *K. brevis* concentrations (TAMU; 9/26-29). New sampling continues to show up to 'medium' *K. brevis* concentrations in the PINS region (TPWD; 9/23) and up to 'high' *K. brevis* concentrations throughout the Lower Laguna Madre to Laguna Vista bay regions and alongshore the Beach Access 6 to Rio Grande region, with the highest concentrations collected alongshore the Coastal Studies Laboratory and in the Lower Laguna Madre at the Parrot Eyes Channel (TPWD; 9/26-28). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>.

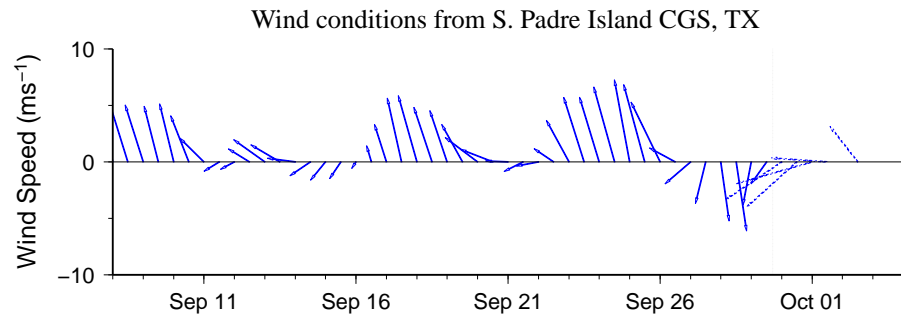
For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (9/28; shown left) has been completely obscured by clouds for the last several days in the bloom region along the Texas coast from Port Aransas to the Rio Grande, preventing analysis. Continued sampling of this region is recommended. Patches of elevated to very high chlorophyll (2 to >20 $\mu\text{g/L}$) are visible along- and off-shore from Sabine Pass to Aransas Pass. Elevated chlorophyll in this region is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecast models based on predicted near-surface currents indicate a maximum transport of 40 km south from the Port Aransas region, 55 km south from PINS Mile Marker #15, and 55 km south from Brazos Santiago Pass from September 28 through October 2.



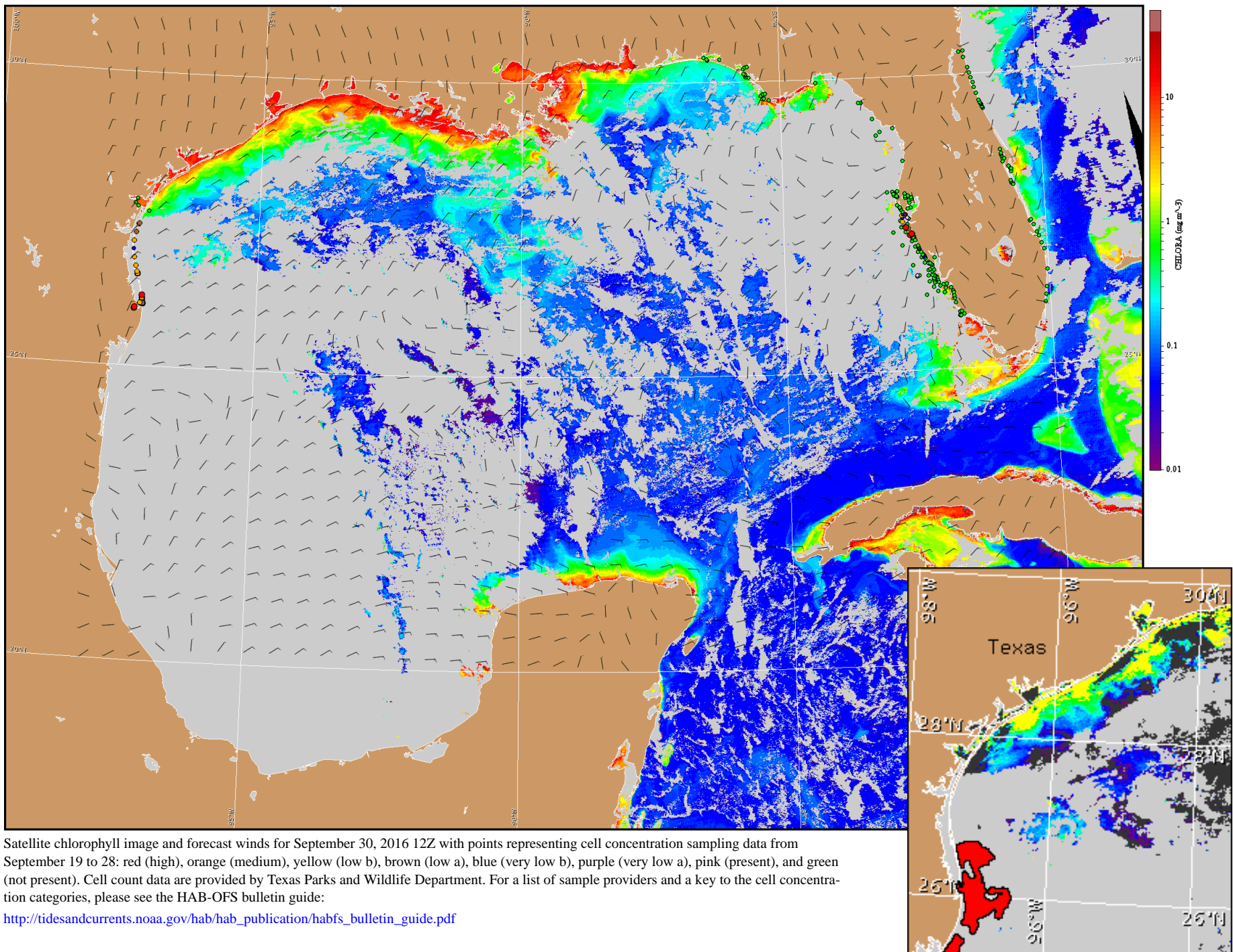
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

Baffin Bay to Port Aransas: North to northeast winds (5-20kn, 3-10m/s) today through Friday. East winds (10kn, 5m/s) Friday night. Northeast winds (10kn) on Saturday becoming east winds (5-10kn, 3-5m/s) Saturday night through Monday night.

Baffin Bay to Port Mansfield: Northeast winds (7-14kn, 4-7m/s) today through Saturday becoming east winds (7-11kn, 4-6m/s) Saturday night. Northeast winds (7-12kn, 4-6m/s) Sunday becoming east winds (7-12kn) Sunday night through Monday night.



Satellite chlorophyll image and forecast winds for September 30, 2016 12Z with points representing cell concentration sampling data from September 19 to 28: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).